SONY

4-421-444-**12**(1)

Digital Still Camera

Instruction Manual

Cyber-shot

MEMORY STICK ™

LITHIUM ION

DSC-W690

English

Learning more about the camera (“Cyber-shot User Guide”)

“Cyber-shot User Guide” is an on-line manual. Refer to it for in-depth instructions on the many functions of the camera.

① Access the Sony support page.
http://www.sony.net/SonyInfo/Support/
② Select your country or region.
③ Search for the model name of your camera within the support page.
• Check the model name on the bottom of your camera.

Checking the supplied items

The number in parentheses indicates the number of pieces.

- Camera (1)
- Battery charger BC-CSN/BC-CSNB (1)
- Power cord (mains lead) (not supplied in the USA and Canada) (1)
- Rechargeable battery pack NP-BN (1)
  (This rechargeable battery pack cannot be used with Cyber-shot that are supplied with the NP-BN1 battery pack.)
- Dedicated USB cable (1)
- Wrist strap (1)
- Instruction Manual (this manual) (1)

Owner's Record

The model and serial numbers are located on the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call your Sony dealer regarding this product.

Model No. DSC-W690

Serial No. _____

WARNING

To reduce fire or shock hazard, do not expose the unit to rain or moisture.

IMPORTANT SAFETY INSTRUCTIONS -SAVE THESE INSTRUCTIONS

DANGER

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS

If the shape of the plug does not fit the power outlet, use an attachment plug adaptor of the proper configuration for the power outlet.

CAUTION

Battery pack

If the battery pack is mishandled, the battery pack can burst, cause a fire or even chemical burns. Observe the following cautions.

- Do not disassemble.
- Do not crush and do not expose the battery pack to any shock or force such as hammering, dropping or stepping on it.
- Do not short circuit and do not allow metal objects to come into contact with the battery terminals.
- Do not expose to high temperature above 60°C (140°F) such as in direct sunlight or in a car parked in the sun.
- Do not incinerate or dispose of in fire.
- Do not handle damaged or leaking lithium ion batteries.
- Be sure to charge the battery pack using a genuine Sony battery charger or a device that can charge the battery pack.
- Keep the battery pack out of the reach of small children.

- Keep the battery pack dry.
- Replace only with the same or equivalent type recommended by Sony.
- Dispose of used battery packs promptly as described in the instructions.

Battery charger

Even if the CHARGE lamp is not lit, the battery charger is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet (wall socket). If some trouble occurs while using the battery charger, immediately shut off the power by disconnecting the plug from the wall outlet (wall socket).

For Customers in the U.S.A. and Canada

RECYCLING LITHIUM-ION BATTERIES

Lithium-Ion batteries are recyclable.
You can help preserve our environment by returning your used rechargeable batteries to the collection and recycling location nearest you.

For more information regarding recycling of rechargeable batteries, call toll free
1-800-822-8837, or visit http://www.rbrc.org/

Caution: Do not handle damaged or leaking Lithium-Ion batteries.

Battery pack

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This Class B digital apparatus complies with Canadian ICES-003.

For Customers in the U.S.A.

UL is an internationally recognized safety organization.
The UL Mark on the product means it has been UL Listed.

If you have any questions about this product, you may call:
Sony Customer Information Center
1-800-222-SONY (7669).
The number below is for the FCC related matters only.

Regulatory Information

Declaration of Conformity

Trade Name: SONY
Model No.: DSC-W690
Responsible Party: Sony Electronics Inc.
Address: 16530 Via Esprillo,
San Diego, CA 92127 U.S.A.
Telephone No.: 858-942-2230

This device complies with Part15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

The supplied interface cable must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

For Customers in Europe

Notice for the customers in the countries applying EU Directives

The manufacturer of this product is Sony Corporation, 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan. The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

This product has been tested and found compliant with the limits set out in the EMC Directive for using connection cables shorter than 3 meters (9.8 feet).

Attention

The electromagnetic fields at the specific frequencies may influence the picture and sound of this unit.

Notice

If static electricity or electromagnetism causes data transfer to discontinue midway (fail), restart the application or disconnect and connect the communication cable (USB, etc.) again.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

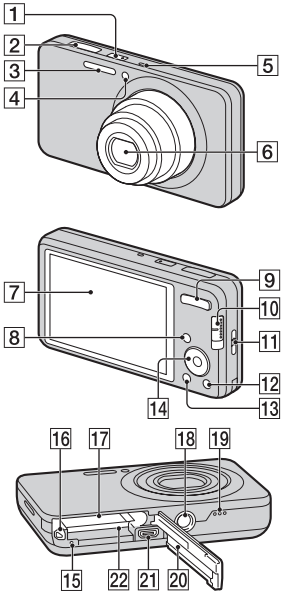
Disposal of waste batteries (applicable in the European Union and other European countries with separate collection systems)

This symbol on the battery or on the packaging indicates that the battery provided with this product shall not be treated as household waste.
On certain batteries this symbol might be used in combination with a chemical symbol. The chemical symbols for mercury (Hg) or lead (Pb) are added if the battery contains more than 0.0005% mercury or 0.004% lead.
By ensuring these batteries are disposed of correctly, you will help prevent potentially negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of the battery. The recycling of the materials will help to conserve natural resources.
In case of products that for safety, performance or data integrity reasons require a permanent connection with an incorporated battery, this battery should be replaced by qualified service staff only. To ensure that the battery will be treated properly, hand over the product at end-of-life to the applicable collection point for the recycling of electrical and electronic equipment.
For all other batteries, please view the section on how to remove the battery from the product safely.
Hand the battery over to the applicable collection point for the recycling of waste batteries.
For more detailed information about recycling of this product or battery, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Notice for customers in the United Kingdom

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.
Should the fuse in the plug supplied need to be replaced, a fuse of the same rating as the supplied one and approved by ASTA or BSI to BS 1362, (i.e., marked with an ⓐ or ♡ mark) must be used.
If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

Identifying parts

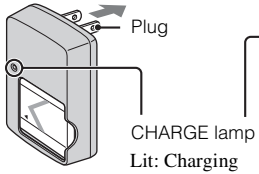


1 ON/OFF (Power) button/Power lamp
2 Shutter button
3 Flash
4 Self-timer lamp/Smile Shutter lamp/AF illuminator
5 Microphone
6 Lens
7 LCD screen
8 ▶ (Playback) button
9 For shooting: W/T (Zoom) button
For viewing: 🔍 (Playback zoom) button/▦ (Index) button
10 Mode switch: 📷 (Still Image)/🎞 (Movie)/▭ (Sweep Panorama)
11 Hook for wrist strap
12 ?/🗑 (In-Camera Guide/Delete) button
13 MENU button
14 Control button
MENU on: ▲/▼/◀/▶/●
MENU off: DISP/⏲/☺/ϟ/
Tracking focus
15 Access lamp
16 Battery eject lever
17 Battery insertion slot
18 Tripod receptacle
- Use a tripod with a screw less than 5.5 mm (7/32 inches) long. Otherwise, you cannot firmly secure the camera, and damage to the camera may occur.

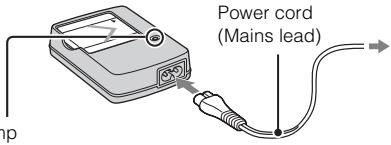
19 Speaker
20 Battery/memory card cover
21 USB / A/V OUT jack
22 Memory card slot

Charging the battery pack

For customers in the USA and Canada



For customers in countries/regions other than the USA and Canada



Lit: Charging
Off: Charging finished (Normal charge)
Flash: Charging error

1 Insert the battery pack into the battery charger.
- You can charge the battery even when it is partially charged.

2 Connect the battery charger to the wall outlet (wall socket).
- If you continue charging the battery pack for about one more hour after the CHARGE lamp turns off, the charge will last slightly longer (Full charge).
- When the CHARGE lamp flashes and charging is not finished, remove and re-insert the battery pack.

Charging time

Full charge time: approx. 245 min.
Normal charge time: approx. 185 min.

Notes

- The above charging times apply when charging a fully depleted battery pack at a temperature of 25°C (77°F). Charging may take longer depending on conditions of use and circumstances.
- Connect the battery charger to the nearest wall outlet (wall socket).
- When charging is finished, disconnect the power cord (mains lead) from the wall outlet (wall socket), and remove the battery pack from the battery charger.
- Be sure to use the battery pack or the battery charger of the genuine Sony brand.
- BC-TRN2 battery charger (sold separately) is able to quick-charge the NP-BN rechargeable battery pack supplied with this model. BC-TRN battery charger (sold separately) is not able to quick-charge the NP-BN rechargeable battery pack supplied with this model.

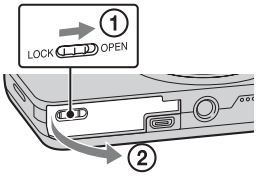
Battery life and number of images you can record/ view

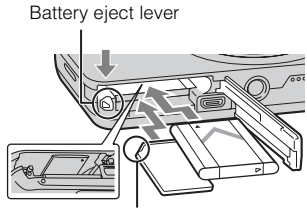
	Battery life (min.)	Number of images
Shooting still images	Approx. 110	Approx. 220
Viewing still images	Approx. 220	Approx. 4400
Shooting movies	Approx. 85	—

Notes

- The number of images that can be recorded is an approximate number when shooting with a fully charged battery pack. The number may be less depending on the circumstances.
- The number of images that can be recorded is when shooting under the following conditions:
  – Using Sony “Memory Stick PRO Duo” (Mark2) media (sold separately).
  – When a fully charged battery pack (supplied) is used at an ambient temperature of 25°C (77°F).
- The number of still images that can be recorded is based on the CIPA standard, and is for shooting under the following conditions.
  (CIPA: Camera & Imaging Products Association)
  – [Disp. Resolution] is set to [Standard].
  – [Panel Brightness] is set to [3].
  – Shooting once every 30 seconds.
  – The zoom is switched alternately between the W and T ends.
  – The flash strobes once every two times.
  – The power turns on and off once every ten times.
- The battery life for movies is when shooting under the following conditions:
  – Recording mode: 720 FINE
  – When continuous shooting ends because of set limits (page 21), press the shutter button down again and continue shooting. Shooting functions such as the zoom do not operate.

Inserting the battery pack/a memory card (sold separately)





1 Open the cover.

2 Insert the memory card (sold separately).
- With the notched corner facing as illustrated, insert the memory card until it clicks into place.

3 Insert the battery pack.
- While pressing the battery eject lever, insert the battery pack as illustrated. Make sure that the battery eject lever locks after insertion.

4 Close the cover.
- Closing the cover with the battery inserted incorrectly may damage the camera.

Memory cards that you can use

	Memory card	For still images	For movies
A	Memory Stick PRO Duo	○	○ (Mark2 only)
	Memory Stick PRO-HG Duo	○	○
	Memory Stick Duo	○	—
B	Memory Stick Micro (M2)	○	○ (Mark2 only)
C	SD memory card	○	○ (Class 4 or faster)
	SDHC memory card	○	○ (Class 4 or faster)
	SDXC memory card	○	○ (Class 4 or faster)
D	microSD memory card	○	○ (Class 4 or faster)
	microSDHC memory card	○	○ (Class 4 or faster)

- In this manual, the products in the table are collectively referred to as follows:
  A: “Memory Stick Duo” media
  B: “Memory Stick Micro” media
  C: SD card
  D: microSD memory card

Note

- When using “Memory Stick Micro” media or microSD memory cards with this camera, make sure to use with the appropriate adaptor.

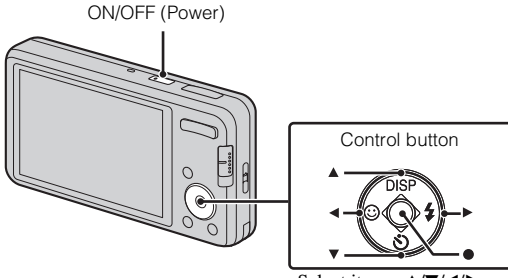
To remove the memory card/battery pack

Memory card: Push the memory card in once.
Battery pack: Slide the battery eject lever. Be sure not to drop the battery pack.

Note

- Never remove the memory card/battery pack when the access lamp (page 8) is lit. This may cause damage to data in the memory card/internal memory.

Setting the clock



1 Press the ON/OFF (Power) button.

Date & Time setting is displayed when you press the ON/OFF (Power) button for the first time.

- It may take time for the power to turn on and allow operation.

2 Select a desired language.

3 Select a desired geographic location by following the on-screen instructions, then press ●.

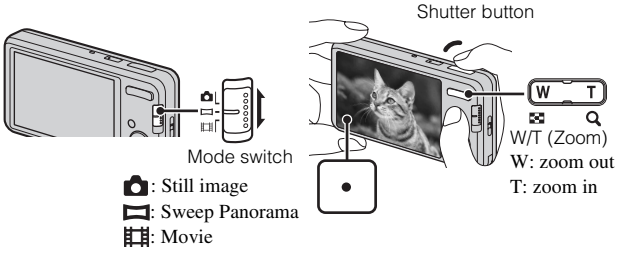
4 Set [Date & Time Format], [Summer Time] and [Date & Time], then press [OK].

- Midnight is indicated as 12:00 AM, and noon as 12:00 PM.

5 Operate following the instructions on the screen.

- The battery power may decrease faster when [Disp. Resolution] is set to [High].

Shooting still images/movies



Shooting still images

1 Press the shutter button halfway down to focus.
When the image is in focus, a beep sounds and the ● indicator lights.

2 Press the shutter button fully down.

Shooting movies

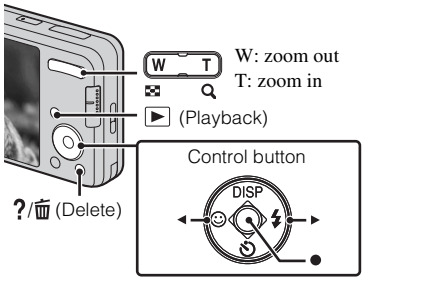
1 Press the shutter button fully down to start recording.
• Use the zoom button to change the zoom scale.

2 Press the shutter button fully down again to stop recording.

Notes

- The operating sound of the lens is recorded when the zoom function operates while shooting a movie.
- You can shoot continuously for approximately 29 minutes at a time when the temperature is 25°C (77°F) and camera is set to the factory settings. When shooting stops, you can press the shutter button again to restart shooting. Depending on the temperature when shooting, recording may automatically stop to protect the camera (page 23).
- The panoramic shooting range may be reduced, depending on the subject or the way it is shot. Therefore even when [360°] is set for panoramic shooting, the recorded image may be less than 360 degrees.

Viewing images



1 Press the ▶ (Playback) button.

- When images on a memory card recorded with other cameras are played back on this camera, the registration screen for the data file appears.

Selecting next/previous image

Select an image with ▶ (next)/◀ (previous) on the control button. Press ● in the center of the control button to view movies.

Deleting an image

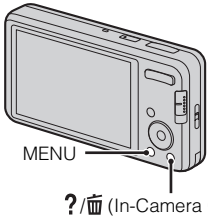
① Press ?/🗑 (Delete) button.
② Select [This Image] with ▲ on the control button, then press ●.

Returning to shooting images

Press the shutter button halfway down.

In-Camera Guide

This camera contains an internal function guide. This allows you to search the camera's functions according to your needs.



1 Press the MENU button.

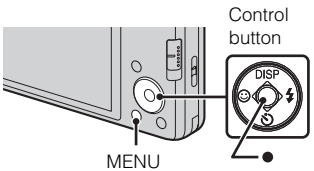
2 Select an item whose description you want to view, then press the ?/🗑 (In-Camera Guide) button.

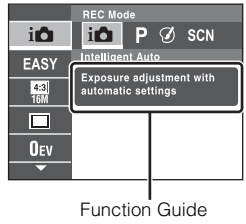
The operation guide for the selected function is displayed.

- You can search for a function by key word(s) or icon, by pressing the ?/🗑 (In-Camera Guide) button when MENU is not displayed.

Introduction of other functions

Other functions used when shooting or playing back can be operated using the control button or MENU button on the camera. This camera is equipped with a Function Guide that allows you to easily select from the functions. While displaying the guide, try the other functions.





Control button

DISP (Display Setting): Allows you to change the screen display.
(Self-Timer): Allows you to use the self-timer.
(Smile Shutter): Allows you to use the Smile Shutter mode.
(Flash): Allows you to select a flash mode for still images.
● (Tracking focus): Allows you to continue to focus on a subject even if the subject moves.

Menu Items

Shooting

REC Mode	Select recording mode.
Picture Effect	Shoot still images with an original texture according to the desired effect.
Scene Selection	Select pre-set settings to match various scene conditions.
Easy Mode	Shoot still images using minimal functions.
Still Image Size/ Panorama Image Size/Movie Size	Select the image size for still images, panoramic images or movie files.
Color hue	Set the color hue when [Toy camera] is selected in Picture Effect.

Extracted Color	Select the color to extract when [Partial Color] is selected in Picture Effect.
Cont. Shooting Settings	Select single-image mode or burst mode.
EV	Adjust the exposure manually.
ISO	Adjust the luminous sensitivity.
White Balance	Adjust color tones of an image.
Focus	Select the focus method.
Metering Mode	Select the metering mode that sets which part of the subject to measure to determine the exposure.
Scene Recognition	Set to automatically detect shooting conditions in Intelligent Auto mode.
Soft Skin Effect	Set the Soft Skin Effect and the effect level.
Smile Detection Sensitivity	Set the Smile Shutter function sensitivity for detecting smiles.
Face Detection	Select to detect faces and adjust various settings automatically.
DRO	Set DRO function to correct the brightness and contrast and improve the image quality.
Anti Blink	Set to automatically shoot two images and select image in which the eyes are not blinking.
Movie SteadyShot	Set the strength of SteadyShot in movie mode. The angle of view changes when you change the setting.
In-Camera Guide	Search the camera's functions according to your needs.

Viewing

Easy Mode	Set the text-size increases and all indicators become easier to see.
Slideshow	Select a method of continuous playback.
View Mode	Select the display format for images.
Retouch	Retouch an image using various effects.
Delete	Delete an image.
Protect	Protect the images.
Print (DPOF)	Add a print order mark to a still image.
Rotate	Rotate a still image to the left.
In-Camera Guide	Search the camera's functions according to your needs.

Setting items

If you press the MENU button while shooting or during playback, (Settings) is provided as a final selection. You can change the default settings on the (Settings) screen.

Shooting Settings	AF Illuminator/Grid Line/Disp. Resolution/Digital Zoom/Red Eye Reduction/Blink Alert/Write Date
Main Settings	Beep/Panel Brightness/Language Setting/Display color/ Demo Mode/Initialize/Function Guide/Video Out/Eco Mode/USB Connect Setting/LUN Setting/Download Music/Empty Music/Eye-Fi
Memory Card Tool*	Format/Create REC.Folder/Change REC.Folder/Delete REC.Folder/Copy/File Number
Clock Settings	Area Setting/Date & Time Setting

* If a memory card is not inserted, (Internal Memory Tool) will be displayed and only [Format] can be selected.

Install PC application (Windows)

Using the embedded software “PlayMemories Home” allows you to import recorded images to a computer, and edit or process them.
You can record/play back on your camera without installing the software “PlayMemories Home”.

1 Connect the camera to a computer.

2 [Computer] (in Windows XP, [My Computer]) → [PMHOME] → double-click [PMHOME.EXE].

3 Follow the instructions on the screen to complete the installation.

Note

- “PlayMemories Home” is not compatible with Mac OS. If you play back images on a Mac, use the applications that are installed on your Mac.
  For details, see http://www.sony.co.jp/imsoft/Mac/

Useful functions in “PlayMemories Home”

“PlayMemories Home” provides the below useful features, while enabling a variety of other functions by connecting to the Internet and installing the “Expanded Feature”.

- Import and display images recorded with this camera.
- View images in a computer by organizing them by shooting date on a calendar.
- Correct still images (Red Eye Correction, etc.), print, send images by e-mail, and change shooting date/time.
- Save and print images with the shooting date inserted.

Number of still images and recordable time of movies

The number of still images and recordable time may vary depending on the shooting conditions and the memory card.

Still images

(Units: Images)

Capacity / Size	Internal memory	Memory card
	Approx. 27 MB	2 GB
16M	4	265
VGA	165	11000
16:9(12M)	4	330

Movies

The table below shows the approximate maximum recording times. These are the total times for all movie files. Continuous shooting is possible for approximately 29 minutes. The maximum size of a movie file is up to approximately 2 GB.

(h (hour), m (minute), s (second))

Capacity / Size	Internal memory	Memory card
	Approx. 27 MB	2 GB
1280×720(Fine)	—	20m (15m)
1280×720(Standard)	—	35m (25m)
VGA	1m (45s)	1h 5m (50m)

The number in ( ) is the minimum recordable time.

- The recordable time of movies varies because the camera is equipped with VBR (Variable Bit Rate), which automatically adjusts image quality depending on the shooting scene. When you record a fast-moving subject, the image is clearer but the recordable time is shorter because more memory is required for recording. The recordable time also varies depending on the shooting conditions, the subject or the image size settings.

Notes on using the camera

On use and care

Avoid rough handling, disassembling, modifying, physical shock, or impact such as hammering, dropping or stepping on the product. Be particularly careful of the lens.

Notes on recording/playback

- Before you start recording, make a trial recording to make sure that the camera is working correctly.
- The camera is neither dust-proof, nor splash-proof, nor water-proof.
- Avoid exposing the camera to water. If water enters inside the camera, a malfunction may occur. In some cases, the camera cannot be repaired.
- Do not aim the camera at the sun or other bright light. It may cause the malfunction of the camera.
- If moisture condensation occurs, remove it before using the camera.
- Do not shake or strike the camera. It may cause a malfunction and you may not be able to record images. Furthermore, the recording media may become unusable or image data may be damaged.

Do not use/store the camera in the following places

- In an extremely hot, cold or humid place
  In places such as in a car parked in the sun, the camera body may become deformed and this may cause a malfunction.
- Under direct sunlight or near a heater
  The camera body may become discolored or deformed, and this may cause a malfunction.
- In a location subject to rocking vibration
- Near a location that generates strong radio waves, emits radiation or is strongly magnetic place. Otherwise, the camera may not properly record or play back images.
- In sandy or dusty places
  Be careful not to let sand or dust get into the camera. This may cause the camera to malfunction, and in some cases this malfunction cannot be repaired.

On carrying

Do not sit down in a chair or other place with the camera in the back pocket of your trousers or skirt, as this may cause malfunction or damage the camera.

Notes on the screen and lens

The screen is manufactured using extremely high-precision technology so over 99.99% of the pixels are operational for effective use. However, some tiny black and/or bright dots (white, red, blue or green) may appear on the screen. These dots are a normal result of the manufacturing process, and do not affect the recording.

On camera's temperature

Your camera and battery may get hot due to continuous use, but it is not a malfunction.

On the overheat protection

Depending on the camera and battery temperature, you may be unable to record movies or the power may turn off automatically to protect the camera.
A message will be displayed on the screen before the power turns off or you can no longer record movies. In this case, leave the power off and wait until the camera and battery temperature goes down. If you turn on the power without letting the camera and battery cool enough, the power may turn off again or you may be unable to record movies.

On charging the battery

If you charge a battery that has not been used for a long time, you may be unable to charge it to the proper capacity.
This is due to the battery characteristics, and is not a malfunction. Charge the battery again.

Warning on copyright

Television programs, films, videotapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provisions of the copyright laws.

No compensation for damaged content or recording failure

Sony cannot compensate for failure to record or loss or damage of recorded content due to a malfunction of the camera or recording media, etc.

Cleaning the camera surface

Clean the camera surface with a soft cloth slightly moistened with water, then wipe the surface with a dry cloth. To prevent damage to the finish or casing:
– Do not expose the camera to chemical products such as thinner, benzine, alcohol, disposable cloths, insect repellent, sunscreen or insecticide.

Specifications

Camera

[System]

Image device: 7.75 mm (1/2.3 type) color CCD, Primary color filter
Total pixel number of camera: Approx. 16.4 Megapixels
Effective pixel number of camera: Approx. 16.1 Megapixels
Lens: Sony G 10× zoom lens
f = 4.45 mm – 44.5 mm (25 mm – 250 mm (35 mm film equivalent))
F3.3 (W) – F5.9 (T)
While shooting movies (16:9): 27.5 mm – 275 mm*
While shooting movies (4:3): 33.5 mm – 335 mm*
* When [Movie SteadyShot] is set to [Standard].
SteadyShot: Optical
Exposure control: Automatic exposure, Scene Selection (11 modes)
White balance: Automatic, Daylight, Cloudy, Fluorescent 1/2/3, Incandescent, Flash, One Push
Recording interval for Burst mode: Approx. 1.0 second
File format:
Still images: JPEG (DCF, Exif, MPF Baseline) compliant, DPOF compatible
Movies: MPEG-4 AVC/H.264
Recording media: Internal Memory (Approx. 27 MB), "Memory Stick Duo" media, "Memory Stick Micro" media, SD cards, microSD memory cards
Flash: Flash range (ISO sensitivity (Recommended Exposure Index) set to Auto):
Approx. 0.3 m to 3.3 m (W) (11 7/8 inches to 10 feet 10 inches)
Approx. 1.5 m to 1.9 m (T) (4 feet 11 1/8 inches to 6 feet 2 7/8 inches)

[Input and Output connectors]

USB / A/V OUT jack:
Video output
Audio output
USB communication
USB communication: Hi-Speed USB (USB 2.0)

[Screen]

LCD screen:
7.5 cm (3.0 type) TFT drive
Total number of dots:
230 400 dots

[Power, general]

Power: Rechargeable battery pack NP-BN, 3.6 V
Power consumption (during shooting): 1.1 W
Operating temperature: 0°C to 40°C (32°F to 104°F)
Storage temperature: –20°C to +60°C (–4°F to +140°F)

Dimensions (CIPA compliant):
94.3 mm × 56.1 mm × 21.7 mm (3 3/4 inches × 2 1/4 inches × 7/8 inches) (W/H/D)
Mass (CIPA compliant) (including NP-BN battery pack, "Memory Stick Duo" media):
Approx. 142 g (5.0 oz)
Microphone: Monaural
Speaker: Monaural
Exif Print: Compatible
PRINT Image Matching III: Compatible

BC-CSN/BC-CSNB battery charger

Power requirements: AC 100 V to 240 V, 50 Hz/60 Hz, 2 W
Output voltage: DC 4.2 V, 0.25 A
Operating temperature:
0°C to 40°C (32°F to 104°F)
Storage temperature:
–20°C to +60°C (–4°F to +140°F)
Dimensions:
Approx. 55 mm × 24 mm × 83 mm (2 1/4 inches × 31/32 inches × 3 3/8 inches) (W/H/D)
Mass: Approx. 55 g (1.9 oz)

Rechargeable battery pack NP-BN

Used battery: Lithium-ion battery
Maximum voltage: DC 4.2 V
Nominal voltage: DC 3.6 V
Maximum charge voltage: DC 4.2 V
Maximum charge current: 0.9 A
Capacity:
typical: 2.3 Wh (630 mAh)
minimum: 2.2 Wh (600 mAh)

Design and specifications are subject to change without notice.

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http://www.sony.net/

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